Amendments to the Specification

Please amend the specification as follows:

Insert a new heading and paragraph after the title as follows:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of and claims priority from co-pending U.S. Patent Application Ser. No. 09/726,821 filed November 30, 2000 and entitled HIGH VOLTAGE SURGE PROTECTION ELEMENT FOR USE WITH CATV COAXIAL CABLE CONNECTORS.

Amend the following paragraphs as indicated:

[021] Referring now to the drawings, wherein like reference numerals refer to like parts throughout, there is seen in Figure 1 a coaxial cable connector, designated generally by reference numeral 10, extending along a longitudinal axis X-X and having a coaxial cable ~~12~~ interconnected thereto. Although not expressly illustrated in the drawings, it should be understood that the coaxial cable ~~12~~ comprises a central conductor immediately surrounded by a layer of dielectric material of predetermined thickness, an outer conductor concentric with the central conductor and surrounding the dielectric material, and an outer layer of insulating material surrounding the exterior surface of the outer conductor.

[023] An electrical component, designated generally by reference numeral 28, and ~~shown~~ illustrated as being composed of a capacitor 30 and a resistor 32 extending rearward ~~rearwardly~~ therefrom, is positioned within cavity 20. It should be understood that electrical component 28 could be any standard type of electrical component that is incorporated into coaxial cable conductors, such as integrated circuits that form filters, amplifiers, traps, and the like. A pin 34 is soldered or otherwise connected to electrical component 28 and extends forward ~~forwardly~~ therefrom along longitudinal axis X-X. Pin 34 terminates in a head 36 of a conductive pin 12 at which point it is electrically interconnected to the central conductor of the coaxial cable ~~12~~. ~~It should be understood that pin 34 may be separated from the central conductor of coaxial cable 12 by a tap, or other common component used in a CATV system, but it is important that pin 34 be~~

~~electrically interconnected to the central conductor of coaxial cable 12~~. Electrical component 28 further comprises a lead 38 that is soldered or otherwise securely connected to body 14 and extends rearwardly from resistor 32 along longitudinal axis X-X.

[025] Under normal operating conditions, the coaxial cable ~~12~~ carries and transmits 90 Volts AC. There may be occasions, however, where high voltage surges impact upon and are carried by the coaxial cable ~~12~~, such as, for example, in the event it is struck by lightening. If this high voltage surge was to be transmitted to ~~pin~~ pins 12 and 34 and then carried to electrical component 28, the devices comprising electrical component 28 would in most instances become inoperable as they would not be able to receive such surges without their conductive elements melting or otherwise deteriorating.

[027] Surge protective element 42 is positioned with its body portion 44 in electrically conductive contact with shoulder 24, and prong(s) 46 extending radially inward ~~inwardly~~ therefrom. To ensure that body portion 44 remains in electrically conductive contact to shoulder 24, surge protective element may be press fit, or otherwise securely engaged with connector 10. When in this position, prong(s) 46 are positioned in close proximity to, but in non-contacting relation to ~~pin 34~~ head 36, thereby leaving a spark gap 48 therebetween (see Figure 1). As is well known in the art, the dielectric strength of air is 3,000,000 Volts/Meter and thus a voltage of 300 Volts will produce a spark in an air gap of 0.1 mm. Thus, the size of spark gap 48 dictates the voltage level at which surge protective element 42 will trigger the electric current to pass through body 14 ~~(~~and go to ground~~)~~ instead of through electrical component 28.

[028] Thus, in the event of a high voltage surge of electricity passing through connector 10~~coaxial cable 12~~, if the surge is above a predetermined value as determined by the size of spark gap 48, a spark will arc across gap 48, and the majority of current will run through prong(s) 46 and to ground through the conductive connection between body portion 44 and shoulder 24. ~~(i.e., a~~ A small amount of current may pass into connector 10, but due to the differences in resistive properties between surge protective element 42 and electrical component 28, only a non-harmful amount of current will pass into connector 10~~)~~. Accordingly, surge protective element 42 protects electrical components 28 from high voltage surges of electricity

by providing an alternate path for the current that goes around the components and to ground through body 14.

[029] Referring to Figures 3A and 3B, alternate embodiments of surge protection element 42' and 42" are illustrated, respectively. Surge protection element 42' comprises a ring-like body 44' (i.e., a washer) and prongs 46' are integrally formed on and extending radially outwardly from body 44'~~the head 36' of pin 34'~~. The prongs 46' are defined by star shaped protrusions extending radially outwardly from head 36'. Again, surge protective element 42' would work if it included only a single, or any other number of protrusions 46'.

[030] Alternatively, surge protective element 42' could be ~~comprised~~ composed of only head 36'~~pin 34'~~ having prongs 46' extending radially outwardly therefrom, provided the length of each prong 46' was sufficient to leave an appropriate spark gap between their ends and the internal surfaces of threaded portion 22'~~ (see Figure 3C)~~.

[032] Alternatively, surge protective element 42" could be ~~comprised~~ composed of only pin 34" having prongs 46" extending radially outwardly therefrom, provided the length of each prong 46" was sufficient to leave an appropriate spark gap between their ends and the internal surfaces of threaded portion 22"~~ (see Figure 3D)~~.

[33] Referring to Figures 3C and 3D, the prongs 46 shown in Figure 3 can be greatly enlarged as are prongs 46' in Figure 3C, this giving ring-line body 44 the appearance of more of a disc than a ring, or can be curved as are prongs 46" in Figure 3D. In each case, the spark gap is between head 36', 36" and prongs 46', 46" respectively. It should be understood that the shape and composition of surge protective ~~protection~~ element 42 could vary from those of the disclosed embodiments without departing from the spirit and scope of the present invention as defined in the appended claims.

Please amend the Abstract as follows (a clean copy of the Abstract is appended to this Preliminary Amendment):

~~The present invention provides a conventional cable connector, such as a UMTR (Universal Male Terminator type connector), that further comprises an~~ An electrically conductive element for protecting ~~the~~ electrical components positioned within a~~the~~ cable connector or cable terminator from high voltage surges~~. The surge protection element comprises~~

includes a ring that is positioned in circumferentially surrounding relation to the input pin of the connector or terminator that carries the signal being transmitted by the coaxial cable. The ring includes at least one~~, and preferably three prongs~~ prong that extends ~~extend~~ radially inward ~~inwardly~~ therefrom which ~~and terminate~~ terminates in close~~,~~ but non-contacting relation to the input pin. When ~~If~~ a high voltage surge of electricity is carried by the coaxial cable transmission line, ~~such as might occur if it is struck by lightening,~~ a spark is~~will be~~ formed in the gap between the prong ~~prongs~~ and the cable connector or terminator~~due to the conductive composition of the surge protection element~~. As a consequence, the high voltage surge is ~~will be~~ transferred to the surge protection element which~~,~~ in turn~~, will conduct~~ conducts the electricity to the grounded body of the connector or terminator~~connector to which it is positioned in contacting relation~~. ~~The body of the conductor will then carry the high voltage surge of electricity around the electrical components positioned within it, and ultimately to ground.~~